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### **Toward 2015, Challenges for a Medium Navy: An Australian Perspective**

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**T**he purpose of this article is to provide an operator's assessment of future challenges for a medium sized Navy from an Australian perspective. I am going to range quite widely across warfighting and organizational issues and suggest a few areas where I might be able to generate some work for our judge advocate colleagues. I will conclude with a short scenario that I hope will set people thinking about the legal issues associated with future combat operations, enabled by network centric warfare in a coalition setting.

Let me begin by addressing what I see as the most important future warfighting trends. I am sure that they will not be a surprise to most of you. The Royal Australian Navy's (RAN) job is to protect the sovereignty of Australia, Australia's interests and Australian citizens. Australia's interests are global, our national security strategy is maritime in nature and our government's approach to global security issues reflects these facts. Therefore, the first enduring trend is a requirement for our Navy to be able to project maritime power at home and offshore, wherever Australia's interests may lie. This trend is accompanied by a requirement to deliver combat power across the spectrum of conflict, whether that be in support of coalition

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combat operations in the war on terror, providing a secure environment in a failed State or delivering humanitarian support to regional neighbors. That being said, the Australian Defence Force (ADF) acquires capabilities in support of combat operations and adapts those capabilities, along with our tactics, techniques and procedures, to deliver options to the Government across the remainder of the mission space. We do not, as a general rule, acquire major capabilities that only have applications in operations other than combat. We simply can't afford it.

Earlier, I perhaps over-emphasized that the RAN is in the business of looking after Australia's national interest to make a point. Often in the coalition context we hear about the notion of common national interests. I would argue that this notion is generally a fallacy. In coalitions, compatible national interests are and certainly must be present, but compatible interests are not necessarily common interests. Even in the tightest of alliances or coalitions we will see divergences in the handling of certain issues. The fact that coalition partners are signatories, or not signatories, to a range of international treaties is a direct reflection of political divergence. Noting the observations of Clausewitz—that war is a continuance of the political discourse by other means—it follows that within the coalition force we immediately have the potential for a number of different military objectives, reflecting differing national political objectives. A tension is thus created within coalition structures; in my view that tension is an enduring feature of coalitions and therefore of the future war fighting landscape. It is up to military commanders to account for and manage national divergences so that unity of effort is maintained, within national constraints and in accordance with national priorities.

Military lawyers play a large part in harmonizing, where practicable, national rules of engagement (ROE) and establishing procedures within coalitions to account for political divergences. I would offer that these issues need to be addressed very early in the planning process as they have the potential to affect the very essence of an operation; from targeting to operating areas, from rules of engagement to task group disposition. Before I leave this subject I would not want to leave you with the impression that political divergence always offers problems, in fact it often offers opportunities. It may be possible for a coalition commander to use the forces of another nation to undertake a task with more freedom of maneuver than would be available to their own forces. For example, I experienced this in the Red Sea in 1992/93 where Australian ROE gave our units greater freedom of action, in certain areas, when conducting maritime interception operations with coalition partners. This was an advantage to the US commander, who subsequently employed RAN units closest to the Straits of Tiran at the mouth of the Gulf of Aqaba to intercept "inspection runners" when required.

A trend in all Western armed services is that warfighting is being undertaken via the application of joint effects. In Australia, we are a relatively small defense force and enjoy a close relationship between the Services. Yet we have still learned lessons about operating as a joint force in recent times. The joint application of combat power will be an enduring feature of the future warfighting landscape. Even simple issues such as terminology can mean different things to people from different Services from the same nation. Maritime forces are also increasingly being required to provide support to the joint force ashore. I will have more to say on this issue a little later on.

In the Australian context, we are also seeing responses to security issues increasingly being approached from a whole-of-government perspective. The military must work with other government, and importantly non-government, agencies to achieve the mission at hand. In some circumstances, perhaps most, it could be argued that the activities of other, non-military government agencies are the war winners. In these circumstances, the military's role becomes one of providing a secure environment so they can get on with their job; this is probably now the case in Iraq.

Australia's recent lead role in the Regional Assistance Mission to the Solomon Islands is another example. This was a Department of Foreign Affairs and Trade led mission in close partnership with the Australian Federal Police, the ADF and others. The ADF contributed its weight and presence to the equation, creating a secure environment so police and other government agencies could assist the Solomon Island authorities to regain control of their community and system of government. As a result of this whole-of-government trend, we are seeing increased numbers of non-military personnel legitimately in combat zones. This has advantages and challenges. Obviously, some adversaries often fail to make any distinction between a combatant and a noncombatant in this regard; they simply fight by a different set of rules or lack thereof. This poses interesting force protection and ROE quandaries for the modern day and future commander.

The future maritime warfighting environment is characterized by lethality no matter what mission you are conducting, whether it is peace operations, assisting with law enforcement in territorial waters or delivering humanitarian aid. The asymmetric threat of non-State players, including disaffected people and elements of transnational crime, enabled by the proliferation of weapon technologies and unrestrained by an obligation to comply with the law of armed conflict, has diminished warning time for a potential engagement and has further blurred the distinction between combatants and noncombatants. Lethal effects can be delivered by individuals or small groups on an increasingly devastating scale. A humanitarian aid mission in an area frequented by terrorist groups can be as lethal as

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combat operations in a State-on-State scenario. It is only the duration, magnitude and potential warning time of the lethal engagement that varies, not whether lethality is present or not.

As a result of the global trend of urbanization, particularly in coastal regions, and the importance of the sea for global trade, I think it is fair to say that the majority of the world's future security issues will have an element either on, or within influence of, the sea. Accordingly, we conclude that future maritime force operations will be dominated by the littoral; a parallel development to the increasing importance of urban terrain to the land force. Littoral environments mean an increase in the density of noncombatants, complications from terrain and the environment, and the increased presence of sea mine and land-based threats. Combine this with asymmetric tactics, the blurring of combatants and non-combatants, reduced warning times and increased lethality and we have significant ROE, target identification, threat response time and force protection challenges.

Another trend from recent conflicts that we see continuing is the problem of access, basing and overflight rights. In Australia's region, this is particularly relevant. From my observations, it is not the culture of Asian nations to get involved in what they consider each other's internal business—a fair enough stance. The recent Southeast Asian regional non-aggression pact proposal is probably a reflection of this position. Combine this trend with the littoral emphasis of future operations and the response is to develop sea basing concepts. The RAN's Future Maritime Operating Concept also looks to leverage the freedoms and maneuver space of the sea. Those freedoms are embedded in the United Nations Convention on Law of the Sea (1982 LOS Convention).<sup>1</sup> Australia has signed and ratified this treaty. Archipelagic sea lanes, international straits and complex maritime boundary interpretations abound in Australia's potential mission space. Our lines of communication lay across and through all of these maritime areas. The 1982 LOS Convention remains a key convention in a globalized world where seaborne trade accounts for the vast majority of global commerce and is crucial to energy flows. Freedom of the sea is obviously key to the freedom of maneuver of coalition navies.

On the technology side of warfare, we are seeing the increased use of unmanned vehicles for surveillance and for offensive and defensive purposes. With the future development and confluence of miniaturization, propulsion technologies and fuel cells, nanotechnology, communications and computing technologies we will see the capabilities and presence of unmanned platforms increase in all warfighting domains. Potential legal issues abound here.

Missile technologies are proliferating at an accelerated rate; their speed and in particular their ranges are rapidly increasing. These missiles are now fire-and-forget, but I am sure we will see increasing levels of artificial intelligence in missiles. For

example, on arrival at a target area a missile may reassign itself if the target appears to have moved or seems absent. How does this sit with ROE and identification criteria? There is also the potential for land forces to reassign the missile in flight should a target be destroyed while the missile is inbound. Again, take the situation of forces from one nation reassigning a missile from another with the firing unit having little say in the process. Vexing legal problems arise that must be overcome so that warfighters can leverage advances in technology. Sea mines are in the inventories of many maritime nations and it would be reasonable to expect that non-State actors could acquire these technologies without too much trouble, should they so desire. Of course, submarines are entering service with many nations, particularly in Australia's area of interest. They are a great weapon if you are trying to leverage an asymmetric advantage or are simply outgunned on or above the surface of the ocean.

To top it all off, the future maritime battlespace will be wrapped in a network, linking sensors to shooters and, in theory, facilitating a pervasive situational awareness that will synchronize forces and provide subordinate commanders with the information they need to act independently to implement the senior commander's intent. Decision cycles will be compressed and fires delivered faster to deal with elusive and mobile targets. Network enabled operations will be a feature of the future.

As you are well aware, the United States leads the world in military technology in most areas and in particular in implementing a network centric approach. The cost of technology is generally very high and for some, possibly our own Navy, the full implementation of network centric warfare (NCW) may simply be unaffordable. Australia uses technology to generate a fighting edge. Importantly, this also includes the smarter application of technology as proliferation of modern weapons and sensors narrows the gap between others and ourselves. Let me say at this juncture, there is no quandary in the mind of Australia's military leaders when we examine where we might need to be technologically; we use interoperability with the United States as a benchmark. However, we must strike a balance that ensures we remain interoperable with both technically advanced allies and those not as technically advanced, but no less important, regional and coalition partners. Australia successfully led the UN effort in East Timor because it had the ability to flex its command and control systems, technology, tactics, techniques and procedures in both directions to accommodate coalition partners across a range of technological capabilities. We must continue to achieve this balance within a tight budget. This will challenge our ingenuity and, I suspect at times, our patience!

Let me move on to organizational challenges. Recently, my Chief of Navy released his strategic guidance for the Future Navy known as Plan Blue. This

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document examined the future Navy we need to be and the challenges that will face us. I would like to touch on but a few of those issues.

I think it is fair to say that our two largest concerns will be people and budgets. Western populations are aging and stagnating, yet our economies continue to grow. This places an enormous strain on our all volunteer Navy's traditional recruiting base. Competition with industry for the right people will sharpen markedly over the coming decades. Engineering and technical skills will be in particular demand. In our view, the RAN will probably become incrementally smaller with time, yet it must deliver the same—if not a greater—warfighting punch. Careful management and preservation of our most precious resource, people, will be required to manage workloads, ensure the Service is an attractive career option and, once people are part of our Service, ensure we retain them. As you are all well aware, uniformed people are a rare and very expensive asset in which the armed services make a substantial investment. Regardless of technological prowess, war is a clash of wills, it is a human endeavor and, at the end of the day, the fighting effectiveness of militaries is all about the quality of their people.

An aging population and infrastructure reinvestment requirements will generate increasing fiscal demand within the budgetary structure of a decreasing personal tax base. By our Government's own analysis, post-2017 Australia will not be able to fund its governance without incurring budget deficits. Obviously, structural changes to taxation and spending patterns will be required to address this challenge. I think the impact on a medium navy is obvious; an expectation of real funding increases in the longer term, while possible, is not likely, barring a major discontinuity in the world's security situation. So it is a pretty simple problem to articulate; do our business better with fewer people and fewer resources.

These two critical factors, along with the warfighting trends addressed above, will generate a range of other future issues. I will touch on but a few. Within our ships we will see increasing automation to decrease the requirement for people and help manage the workload of smaller ships' companies. There will be an increasing number of human-machine interfaces and eventually machine-machine interfaces. Decision support systems may be required to implement decisions programmed into them without a human in the loop. Ships will have to stay at sea longer in order to maximize greater reliability and availability, but somehow we must balance workloads and retain our people. In the future, our ships will continue to have to comply with international treaties to which our governments may be party. Environmental law and occupational health and safety will play an increasing role in ship design, maintenance and operation. As some will be aware, the RAN has recently purchased the double hulled merchant tanker *Delos*, soon to be commissioned as *HMAS Sirius*, so that we comply with the International Maritime

Organization's (IMO) pollution from ships requirements for the transportation of fuels at sea,<sup>2</sup> just as an example.

The eternal drive for fiscal efficiency will see the greater use of contracted support both on and off board our ships. Contractors will have to be integrated into the way we do our business rather than being seen as simply delivering services. We may find that the armed services and defense industry effectively share people as the workforce skill base decreases in proportion to demand. The legal aspect of contracted support to deployed operations is an area we could talk about for hours. Are contractors in providing direct support to the force combatants or noncombatants, and from whose perspective? In this case are they under military command or are they not? Are they subject to the Defence Force Discipline Act (or the Uniform Code of Military Justice (UCMJ) for the United States)? What if a contractor refuses to deliver services into a combat zone despite the usual fiscal enticements and contractual requirements? Can we compel a contractor to put civilians in harm's way and subject to the constant presence of lethal force? The status of contractors vis-à-vis host nations who provide logistic support also raises issues as, for example, in the application of local health, safety and insurance laws and regulations. With regard to the protection of host nation contractors, do they become designated persons under our rules of engagement or not? Not to mention status of forces agreements or arrangements or memorandums of understanding, or whatever the flavor of the month happens to be. These are issues that we have had to address during recent operations and must continue to address in the future.

There are numerous other issues to consider, such as the competition for maritime practice areas with commercial interests and environmental concerns. The issue of whales and sonar has recently been of contention both in the United States and in Australia. Increasing commercial traffic and access to ports, security of warships in ports and the application of security zones around warships are but a few of the contentious issues with which we must wrestle.

Let me conclude with a very brief scenario that encapsulates some interesting contemporary and future warfighting and international law issues.

The year is 2015 and His Majesty's Australian Ship *Adelaide* lays 20 miles offshore on the boundary of the new territorial sea limit. It would be better if she were in at 12 miles like the old days. The combat system is up, the decision support software filters information, delivering only, as the system has been programmed, assessments that a person can consume. A hypersonic, autonomous, fire-and-forget missile is on the rails. The ship is waiting for the call for fire. There are boats everywhere; whether friend or foe it is hard to tell. Are they hostile intelligence collectors or fishermen? They are all traveling fast and can't all be stopped, boarded and checked out. They seem to be avoiding the 500-meter warship exclusion zone

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though. (Legal or not, the zone seems to be having its desired effect and that's all that counts.)

Ashore Purpleland special forces have identified the target. The E-message streaks through the ether to the Orangeland commanded coalition headquarters. This is a time sensitive target. Just one shot, no time to mess around. The E-message is permitted to auto-progress from the sensor network to the shooter grid for fires allocation. Onboard *Adelaide* the missile launcher bell sounds and almost immediately the familiar sound of a missile streaking landward breaks the silence. The Combat Information Center (CIC) duty officer watches on his heads up, virtual 3D display. He sees the target position and terrain, observes the correct protocols and thinks nothing more of it. There are plenty of time sensitive targets that arise in these war on terror operations. No need to tell the Captain, she was on the bridge and saw the bird go. *Adelaide* sets off for a port visit, a job well done.

Upon arrival, a defense contractor climbs the mast to replace an aerial; he is from the contractor support unit based in the Fleet Forward Operating base. A Captain's worst nightmare unfolds; a sniper has just shot the contractor, and one of her sailors has shot a local who he believes was the assailant. The sailor had no time to think, he had to make a decision. One moment the assailant was bunkering the ship from the wharf, the next minute he was a sniper. No time to ask permission. The ROE talked about this situation, but he never fully understood what he was really meant to do.

The Captain's day is not going to get any better. She has been advised that the missile *Adelaide* fired struck its target. She has also been advised that the target was a local politician. He was visiting a community center; 50 people have been killed. How could this happen? That politician wasn't a combatant within the Australian ROE. His targeting was not consistent with our international obligations! A community center is not an approved target for Australian units and the death of 50 noncombatants is outside national collateral damage/incidental injury limits. The NCW system was meant to be programmed, there were meant to be safeguards in place. What could she have done from sea with the system in automatic? There was no time to confirm the target in any event. It was time sensitive.

Purpleland and Orangeland commanders seem to be notably absent; all the locals know is that the round that killed the apparent sniper came from an Australian ship, as did the missile that hit the community center. In both cases Australia applied the lethal force. These are Australian problems. The Captain sits down and decides to have a drink; you can do that on Australian ships. Common versus compatible national interests, divergent international legal obligations, status of forces agreements, it's all networked, it's all automated and it's all too much for a simple warrior. She decides to call a lawyer . . . after she finishes her drink!



*Notes*

1. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 3, *reprinted in* 21 INTERNATIONAL LEGAL MATERIALS 1261, *available at* [www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindex.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindex.htm).
2. International Convention for the Prevention of Pollution from Ships, Nov. 2, 1973, *reprinted in* 12 INTERNATIONAL LEGAL MATERIALS 1319 (with Protocol of Feb. 17, 1978) [hereinafter MARPOL 73/78]. Regulation 13f to Annex I of MARPOL 73/78 requires that all new tanker vessels built after a designated date be equipped with double hulls, a mid-deck design or the equivalent.